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CLAIMS

1. A display (1) comprising:
a display device (2); and
a transflector (7);
wherein the transflector (7) comprises a plurality of discrete portions and is configured so that the transmittance and reflectance properties of at least one of said portions can be tuned independently of other portions.

2. A display (1) according to claim 1, wherein the transflector (7) is a bistable device.

3. A display (1) according to claim 1 or 2, wherein the transflector (7) is a suspended particle device.

4. A display (1) according to claim 3, wherein said portions include cells containing separate particle suspensions (8a, 8b, 8c).

5. A display (1) according to claim 3 or 4, wherein said portions include spatial regions within a compartment containing a particle suspension.

6. A display (1) according to any one of claims 3 to 5, wherein the suspended particle device (7) is configured to apply one or more electric fields to a particle suspension (8a, 8b, 8c).

7. A display (1) according to claim 6, wherein at least one of the one or more electric fields is inhomogeneous.

8. A display (1) according to claim 6 or 7, wherein at least one of the one or more electric fields is an AC field.

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9. A display (1) according to claim 6, 7 or 8, wherein at least one of the one or more electric fields is a DC field.

10. A display (1) according to any one of claims 6 to 9, wherein the suspended particle device (7) is configured to apply to the particle suspension (8a, 8b, 8c) two electric fields with mutually orthogonal orientations.

11. A display (1) according to any one of claims 6 to 10, wherein the suspended particle device (7) is configured so that, following application to the particle suspension (8a, 8b, 8c) of a first electric field in order to cause the particles within the particle suspension (8a, 8b, 8c) to adopt a first particle alignment, a second electric field may be applied to the particle suspension (8a, 8b, 8c) in order to accelerate relaxation of said first particle alignment.

12. A display (1) according to any one of claims 6 to 11, further comprising an active matrix of electrodes for selectively applying an electric field to one or more particle suspensions (8a, 8b, 8c).

13. A display (1) according to any one of claims 6 to 12, wherein the suspended particle device (7) is configured to apply an electric field to a particle suspension (8a, 8b, 8c) intermittently.

14. A display (1) according to any one of the preceding claims, wherein physical dimensions of the discrete portions are non-identical.

15. A display (1) according to any preceding claim, wherein the display device is a liquid crystal cell (2).

16. A display (1) according to claim 15, further comprising a quarter-wave plate.

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17. A display (1) according to any preceding claim, wherein the display device comprises:

an electrophoretic display;

an electrochromic display;

an electro-wetting display; or

a micromechanical display.

18. A display (1) according to any one of claims 1, 2 or 13 to 17, wherein the transflector is one of:

a switchable mirror display;

an electrochromic display;

an electro-wetting display; and

a roll-blind display.

19. A display (1) according to any one of previous claims, further comprising a light sensor (22).

20. A display (1) according to any preceding claim, further comprising a touch screen arrangement (25).

21. A user interface (24) comprising a transflective display (1) according to any one of claims 1 to 19 and a touch screen arrangement (25).

22. A method of displaying an image (23) on a transflective display (1), which includes a display device (2) and a transflector (7), comprising:

tuning the transmittance and reflectance properties of at least one of a plurality of discrete portions of the transflector (7) independently of other portions.

23. A method according to claim 22, wherein the transflector (7) is a suspended particle device and the step of tuning comprises applying one or more electric fields to a particle suspension (8a, 8b, 8c).

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24. A method according to claim 23, wherein said step of tuning comprises applying one or more electric fields to a plurality of separate particle suspensions (8a, 8b, 8c).

25. A method according to claim 23 or 24, wherein at least one of said one or more electric fields is an inhomogeneous AC electric field.

26. A method according to claim 23 or 24, wherein at least one of said one or more electric fields is an AC field.

27. A method according to any one of claims 23 to 26, wherein at least one of said one or more electric fields is a DC field.

28. A method according to any one of claims 23 to 27, wherein said step of tuning comprises applying one or more electric fields to the particle suspension (8a) intermittently.

29. A method according to any one of claims 23 to 28, wherein at least one of said electric fields has a potential less than a saturation potential of the particle suspension (8a, 8b, 8c).

30. A method according to any one of claims 23 to 29, further comprising, following the application of a first electric field in order to cause particles within a particle suspension (8a, 8b, 8c) to adopt a given alignment, applying a second electric field in order to accelerate relaxation of said alignment.

31. A method according to any one of claims 22 to 30, wherein the step of tuning the transflector (7) comprises tuning the transmittance and reflectance values of at least one portion in accordance with a level of ambient light (10) detected by a light sensor (22).